CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 79-103

NPDES PERMIT NO. CA0037885

WASTE DISCHARGE REQUIREMENTS FOR:

CONTRA COSTA COUNTY SANITATION DISTRICT #5 (PORT COSTA)
CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter the Board) finds that:

1. Contra Costa County Sanitation District No. 5, hereinafter called the discharger, submitted a report of waste discharge (NPDES Standard Form A) dated January 4, 1979.

2. Contra Costa County Sanitation District No. 5 discharges approximately 0.025 million gallons per day (mgd) of domestic waste containing pollutants into Carquinez Strait, a water of the United States, at the northeastern end of the town of Port Costa at a point approximately 36 feet northerly from the shoreline. The present treatment includes primary sedimentation and disinfection. Settled sludge is pumped into a truck and hauled to a Class II-2 disposal site. The plant design capacity is 0.05 mgd.

3. The discharger is now designing facilities to comply with federal secondary treatment and Basin Plan requirements. Completion is anticipated in November 1980.

4. The discharger submitted a request for a compliance time schedule extension pursuant to Section 301(i)(1) of the Clean Water Act. Initial delay beyond the original July 1, 1977, compliance date was caused by late completion of the Environmental Impact Statement for the Subregional study which included Port Costa. Recent delay was caused by special planning studies seeking an economical treatment system within the limited financial resources of the community.

5. In January 1977, a Final Environmental Impact Report and Statement (EIR/EIS) was approved and published by the Environmental Protection Agency and the East/Central Contra Costa County Wastewater Management Agency. The members of this Regional Board have received and reviewed a summary of the water quality impact sections related to Port Costa.

6. The EIR/EIS concluded that:

   a. The proposed treatment upgrading will significantly improve effluent quality.

   b. The proposed short outfall extension will assure rapid dilution of effluent.

c. The projected increase in volume of discharge will have no significant adverse impacts on receiving waters.

7. In April 1975 the Board adopted a Water Quality Control Plan for San Francisco Bay Basin.

8. The beneficial uses of Carquinez Strait are:

a. Contact and non-contact recreation
b. Fish migration and habitat
c. Habitat for wildlife and estuarine organisms including some rare and endangered species
d. Industrial water supply
e. Esthetic enjoyment
f. Navigation.

9. Effluent limitation and toxic and pretreatment effluent standards established pursuant to Sections 208(b), 301, 304, and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharge.

10. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

11. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Contra Costa County Sanitation District No. 5, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. The discharge of an effluent containing constituents in excess of the following limits is prohibited:

Constituents	Units	30-day Average	7-day Average	Maximum Daily
a. BOD	mg/l	30	45	60
	kg/day	3.74		113
b. Suspended Solids	mg/l	30	45	60
	kg/day	3.74		113
c. Oil & Grease	mg/l	10		20
	kg/day	1.24		37.8

d. Chlorine Residual	mg/l			0.0
e. Settleable Matter	ml/l	0.1		0.2

2. The arithmetic mean of values for BOD and Suspended Solids, by weight, in effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of respective values for influent samples collected at approximately the same times during the same period (i.e., 85 percent removal).

3. The discharge shall not have pH of less than 6.0 nor greater than 9.0.

4. In any representative set of samples, the waste as discharged shall meet the following limit of quality:

   TOXICITY:

   The survival of acceptable test organisms in 96-hour bioassays of the effluent shall achieve a 90 percentile value of not less than 50% survival for 10 consecutive samples.

5. The total coliform bacteria for a median of five consecutive effluent samples shall not exceed 240 MPN/100 ml. Any single sample shall not exceed 10,000 MPN/100 ml total coliform bacteria when verified by a repeat sample within 48 hours.

6. Prior to completion of secondary treatment facilities, the following interim limits shall apply:

			30-day Average	Maximum
a.	Settleable Matter	ml/l	0.5	1.0
			5-day Median	Verified Maximum
b.	Coliform	MPN/100 ml	240	10,000

B. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the state at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a.	Dissolved oxygen	7.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
b.	Dissolved sulfide	0.1 mg/l maximum.
c.	pH	Variation from natural ambient pH by more than 0.2 pH units.
d.	Un-ionized Ammonium Hydroxide as N	0.025 mg/l, annual median 0.4 mg/l, maximum

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Discharge Prohibitions

1. There shall be no bypass or overflow of untreated wastewater to waters of the State, either at the treatment plant or from the collection system.

2. The discharge of wastes at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited.

3. The average dry weather flow shall not exceed 0.033 mgd. Average shall be determined over three consecutive months each year.

D. Provisions

1. Neither the treatment nor the discharge of pollutants shall create a nuisance as defined in the California Water Code.

2. The discharger shall comply with the following time schedule to assure compliance with specifications of this Order:

Compliance with Effluent Limitations A.1, A.2, A.3, A.4; Receiving Water Limitations B.1.a, B.2; Prohibitions C.1, C.2.

Task	Completion Date	Progress Report Due
a. Install flow meter	November 30, 1979	November 30 , 1979
b. Submit completed plans and specifications	December 3, 1979	December 3, 1979
c. Submit wet weather flow analysis		December 21, 1979
d. Advertise for Bids	February 15, 1980	March 3, 1980
e. Award Contract	April 15, 1980	May 1, 1980
f. Submit progress report		August 15, 1980
g. Complete Construction	November 17, 1980	December 1, 1980
h. Achieve Full Compliance	December 30, 1980	January 15, 1981

3. The discharger shall review and update annually its contingency plan as required by Regional Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

4. The discharger shall establish written operating procedures which shall be submitted to the Executive Officer 60 days prior to operating any new facilities needed for compliance with this Order.

5. Order 74-75 is hereby rescinded.

6. This Order includes all items of the attached "Standard Provisions, Reporting Requirements and Definitions," dated April 1977, except A-14.

7. The discharger shall comply with the specifications of the Self-Monitoring Program as directed by the Executive Officer.

8. This Order expires on August 21, 1984, and the discharger must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

9. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect at the end of ten days from date of hearing provided the Regional Administrator, U. S. Environmental Protection Agency, has no objection.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on **August 21, 1979.**

FRED H. DIERKER
Executive Officer

Attachments:
Standard Provisions, Reporting Requirements, and Definitions - April 1977
Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

CONTRA COSTA COUNTY SANITATION DISTRICT NO. 5

PORT COSTA

NPDES NO. CA 0037885

ORDER NO. 79-103

CONSISTS OF

PART A , 1/73

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

Station	Description
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

Station	Description
E-001	At any point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present and all treatment has occurred.
E-001-D	At any point in the disinfection facilities for Waste E-001 at which point adequate contact with the disinfectant is assured.

C. RECEIVING WATERS

Station	Description
C-1	At a point in Carquinez Strait, located in the vicinity of the discharge point and accessible from the shoreline.
C-3	At a point in Carquinez Strait, located approximately 50 feet down current from the point of discharge and accessible from the shoreline.
C-R	At a point in Carquinez Strait, located 1,000 feet upcurrent from the point of discharge, accessible from the shoreline.

D. LAND OBSERVATIONS

Station	Description
P-1 thru P-'n'	Located at the corners and midpoints of the perimeter fenceline surrounding the treatment facilities. (A sketch showing the locations of these stations will accompany each report.)

E. OVERFLOWS AND BYPASSES

Station	Description
O-1 thru O-'n'	Bypass or overflows from manholes, pump stations or collection system.

Note: Initial SMP report to include map and description of each known bypass or overflow location.

Reporting - Shall be submitted monthly and include date, time, and period of each overflow or bypass.

II. SCHEDULE OF SAMPLING, MEASUREMENT, AND ANALYSIS

A. The schedule of sampling, measurements, and analysis shall be that given as Table I.A and I.B. Prior to completion of secondary treatment facilities, monitoring shall be according to Table I.A. Following completion, monitoring shall be according to Table I.B.

B. Due to subsurface hazards in the receiving waters, receiving water samples may be taken from the shoreline using a "pole-and-bucket" or similar technique.

III. MODIFICATIONS OF PART A

This Self-Monitoring Program does not include the following paragraphs of Part A:

C.3, C.4, C.5.d, D.4

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 79-103.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

FRED H. DIERKER
Executive Officer

Attachment:
Tables I.A & I.B

Effective Date _____

TABLE I A. (Prior to completion of secondary system)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A	E-001-D			C-1, C-3, C-R
TYPE OF SAMPLE	C-24	G	C-24	Cont	G
Flow Rate (mgd)				D	
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	M		M		
Chlorine Residual & Dosage (mg/l & kg/day)		3/W			
Settleable Matter (ml/l-hr. & cu. ft./day)			M		
Total Suspended Matter (mg/l & kg/day)	M		M		
Oil & Grease (mg/l & kg/day)			Q		
Coliform (Total) (MPN/100 ml) per req't		3/W			Q
Fish Toxicity, 96-hr. TL_{50} % Survival in undiluted waste					
Ammonia Nitrogen (mg/l & kg/day)					
Nitrate Nitrogen (mg/l & kg/day)					
Nitrite Nitrogen (mg/l & kg/day)					
Total Organic Nitrogen (mg/l & kg/day)					
Total Phosphate (mg/l & kg/day)					
Turbidity (Jackson Turbidity Units)					
pH (units)		3/W			Q
Dissolved Oxygen (mg/l and % Saturation)					Q
Temperature (°C)					Q
Apparent Color (color units)					
Secchi Disc (inches)					
Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)					Q
Arsenic (mg/l & kg/day)					
Cadmium (mg/l & kg/day)					
Chromium, Total (mg/l & kg/day)					
Copper (mg/l & kg/day)					
Cyanide (mg/l & kg/day)					
Silver (mg/l & kg/day					
Lead (mg/l & kg/day)					

TABLE I.A (continued)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A	E-001-D			C	P							
TYPE OF SAMPLE													
Mercury (mg/l & kg/day)													
Nickel (mg/l & kg/day)													
Zinc (mg/l & kg/day)													
PHENOLIC COMPOUNDS (mg/l & kg/day)													
All Applicable Standard Observations					M	W							
Bottom Sediment Analyses and Observations													
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)													
Un-ionized NH_3 as N (mg/l and Kg/day)					Q								

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour

Cont = continuous sampling

O = observation

FREQUENCY OF SAMPLING

D = once each day
W = once each week
M = once each month
Y = once each year

3/W = 3 days per week
Q = quarterly, once in March, June, Sept. and December

Cont = continuous

TYPES OF STATIONS

A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations

TABLE I.B (Following completion of secondary system)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A		E-001			E-001-D		C
TYPE OF SAMPLE	G	C-24	G	C-24	Cont	G	C-24	G
Flow Rate (mgd)					D			
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	(1) W/Q			(1) W/Q				
Chlorine Residual & Dosage (mg/l & kg/day) (6)			3/W		Cont	3/W	Cont	
Settleable Matter (ml/l-hr. & cu. ft./day)				(1) W/Q				
Total Suspended Matter (mg/l & kg/day)	(1) W/Q			(1) W/Q				
Oil & Grease (mg/l & kg/day)			Q (3)					
Coliform (Total or Fecal) (MPN/100 ml) per req't						(2) W		
Fish Toxicity, 96-hr. TL_{50} % Survival in undiluted waste				Q				
Ammonia Nitrogen (mg/l & kg/day)				2/Y				(5) M/Y
Nitrate Nitrogen (mg/l & kg/day)								
Nitrite Nitrogen (mg/l & kg/day)								
Total Organic Nitrogen (mg/l & kg/day)								
Total Phosphate (mg/l & kg/day)								
Turbidity (Jackson Turbidity Units)								
pH (units)			(1) W/Q					(5) M/Y
Dissolved Oxygen (mg/l and % Saturation)			(1) W/Q					(5) M/Y
Temperature (°C)								
Apparent Color (color units)								
Secchi Disc (inches)								
Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)								
Arsenic (mg/l & kg/day)								
Cadmium (mg/l & kg/day)								
Chromium, Total (mg/l & kg/day)								
Copper (mg/l & kg/day)								
Cyanide (mg/l & kg/day)								
Silver (mg/l & kg/day								
Lead (mg/l & kg/day)								

TABLE I,B (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A		E-001			E-001-D		C	P				
TYPE OF SAMPLE	G	C-24	G	C-24	Cont	G	C-24	G					
Mercury (mg/l & kg/day)													
Nickel (mg/l & kg/day)													
Zinc (mg/l & kg/day)													
PHENOLIC COMPOUNDS (mg/l & kg/day)													
All Applicable Standard Observations								W(3)	W(4)				
Bottom Sediment Analyses and Observations													
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)													
Un-ionized ammonia as N (mg/l)								Y					

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour

TYPES OF STATIONS

A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations

O = observation

FREQUENCY OF SAMPLING

E = each occurence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

Cont = continuous

Q = quarterly, once in March, June, Sept. and December

FOOTNOTES FOR TABLE I.B

(1) After acquiring 6 months of operating data including wet and dry weather periods, the frequency of sampling may be reduced from weekly to quarterly (Q). If quarterly analysis reveals violations of 30-day average limits, sampling frequency shall be increased to weekly until consistent compliance with permit limits is achieved.

(2) If median of 4 samples shows violations of coliform limitations, sampling frequency shall be increased to 3/W until consistent compliance is verified.

(3) Observations shall include only those contained in items C.5.a(1), (2), (3), and C.5.c. of Part A (Jan 1978) of Self-Monitoring Program.

(4) Perimeter observations shall include only item C.5.c.1 (odors) of Part A (Jan 1978).

(5) Monthly samples shall be collected for 6 months including dry and wet weather periods; frequency may then be reduced to annual.

(6) For chlorine residual prior to de-chlorination, minimum and maximum values from strip charts should be reported on a daily basis. Grab samples taken 3/W should also be reported.

For chlorine residual following de-chlorination, daily maximum should be reported based on strip chart. Grab sample analyses taken 3/W should also be reported.